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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/911,819	07/24/2001	John T. Micco	MWS-077RCE3	6291
7590 Kevin J. Canning, Esq. Lahive & Cockfield, L.L.P. 28 State Street Boston, MA 02109			EXAMINER VU, TUAN A	
			ART UNIT 2193	PAPER NUMBER
			MAIL DATE 12/28/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/911,819

Applicant(s)

MICCO ET AL.

Examiner

Tuan A. Vu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-32 and 34-56 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-32, 34-56 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. This action is responsive to the Applicant's response filed 10/31/07.

As indicated in Applicant's response, claims 1, 3, 5, 11, 21-22, 25, 29, 31, 39, and 49-50 have been amended, with claims 4, 33 previously canceled. Claims 1-3, 5-32, 34-56 are pending in the office action.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-10, 29-38 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation about creating a function library in terms recited as 'function library containing the corresponding function in the second programming language **and** the description information' is not deemed commensurate with the process of creating library 102 (see Specifications Fig. 1) and library 302; that is, in light of the distinct (emphasis added) embodiment of a *function library* and a *description file*, both of which created within the disclosed library generation process 112 (see Fig. 2, step 212). The inventor is not deemed in possession of a function library containing both the above files, thus the recited limitation is considered not enabled by the Specifications, or new added matter because the description does not provide such feature.

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The above feature will be treated as though the description information is not part of the function library.

Claims 9-10 are rejected for not curing to the above deficiency. Claim 29, for reciting the above non-enabling 'function library' limitation, is equally rejected along with claims 30-38, for lack of proper description.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 21-28, 49-56 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. That is, claims 21, 49 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: there appears to be some structural not claimed in the process of 'using the description file' to translate into 'the second programming language'.

The claimed scenario (re claim 21) as a whole comprises generating of function library, and description file, **then**, using said description file to translate a program file (from ... first programming language) into '**the** second programming language'. In order for a target program to be generated, the translating process should include a compiler to yield a target code as a file or an executable module (Specifications: file 306c Fig. 3; file 106, Fig. 1). When this second programming language has been introduced, it has been construed as definitions of functions with some version thereof ending in a 'function library', thus the subsequent 'the second

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programming language' (to translate ... into) cannot be construed as a tangible instance but a mere data structure being stored as library. As this claimed 'function library' is completely disconnected from the step of 'translate a program file', one of ordinary skill in the art would not be able to construe how 'a program file from the first ... language' is translated into 'the second programming language' when there is no explicit teaching that some embodiment for 'the' second programming language is established in order to reasonably convey its being destined to be outputted from the translation process. This amounts to a lack of structural relationship between 'translate a program file from the first ... language' and 'the' second programming language. This lack of tangible embodiment of the result of translating is bordering of a lack of a tangible result, i.e. 'the programming language' would be a mere abstraction, thus typical for a non-statutory subject matter.

Claim 49 is also rejected for not providing relation between 'into the second programming language' and the 'functions being defined by a second language' (i.e. function library being included in the translation process) as recited earlier in light of the 'to translate a program file' context.

Claims 22-28, 50-56 are also rejected for not remedying to the indefinite teaching as set forth above. The translating step will be treated as though it were converting function definition from a first programming language into another version thereof in the function library.

6. Claim 21 recites the limitation "into a call to a corresponding ... the second programming language" (cl. 21, li. 8). There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 101

7. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

8. Claims 21-28, 49-56 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The Federal Circuit has recently applied the practical application test in determining whether the claimed subject matter is statutory under 35 U.S.C. § 101. The practical application test requires that a “useful, concrete, and tangible result” be accomplished. An “abstract idea” when practically applied is eligible for a patent. As a consequence, an invention, which is eligible for patenting under 35 U.S.C. § 101, is in the “useful arts” when it is a machine, manufacture, process or composition of matter, which produces a concrete, tangible, and useful result. The test for practical application is thus to determine whether the claimed invention produces a “useful, concrete and tangible result”.

The current focus of the Patent Office in regard to statutory inventions under 35 U.S.C. § 101 for method claims and claims that recite a judicial exception (software) is that the claimed invention recite a practical application. Practical application can be provided by a physical transformation or a useful, concrete and tangible result. The following link on the World Wide Web is for the United States Patent And Trademark Office (USPTO) policy on 35 U.S.C. § 101. http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/guidelines101_20051026.pdf

Specifically, claim 21 and 49 recite ‘translate a program file ... into **the** second programming language’; and according to indefiniteness raised in the USC 112, 2nd paragraph, there is no sufficient basis for ‘the programming language’ to establish that the resulting effect of ‘translate ... into’ become a tangible file or transformed object, since a programming language remains a language in a broad term, hence a immaterial, non-practical real-world entity. Where the ‘function library’ feature is not instrumental in the step of ‘translate a program file from ... into ...’ as recited, the intermediate stage of the creation of said library is not taken into consideration when analyzing whether a non-abstract final tangible result is actually conveyed by the claim as a whole. The claims amount to yielding an abstracted result; hence are rejected for

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leading to a non-statutory subject matter. Claims 22-28, 50-56 are also rejected for not remedying to the lack of practical result as set forth above.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

10. Claims 11-20, 39-48 are rejected under 35 U.S.C. 102(e) as being anticipated by Meyer, USPubN: 2001/0037417 (hereinafter Meyer).

As per claim 11, Meyer discloses in a computing device, a method comprising:
providing a file of description items, each item including description information about a function associated with a first programming language (e.g. API ... C programming style- para 0094, pg. 7; binary specification - Fig. 5; para 0146 –0175, pg. 8 – Note: binary specification of a software program in first environment – see para 0061, pg. 4; Fig. 10 -- reads on file of description item);

providing a first program file in the first programming language, the first program file (first software program – para 0009, pg. 1; para 0055, pg. 3) containing one or more calls to the function in the first programming language; retrieving an item (e.g. Table 8, pg. 12) from the file of description items;

using the description information to translate each of the one or more calls to the function in the first programming language into a call to a corresponding function in a second

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programming language in a manner that avoids accessing the function in the first programming language (e.g. para 0011-0014, pg. 1-2; Fig. 10, 12); and

using the file of description items to translate the first program file into the second program file (para 0061, pg. 4)

As per claims 12-13, Meyer discloses wherein the description information about the function comprises: a descriptor (e.g. para 0083, pg. 6) identifying a declared number of formal inputs (para 0226, pg. 11) to the function; a descriptor identifying a declared number of formal outputs (para 0087, pg. 6; para 0160, pg. 8) to the function.

As per claims 14-16, Meyer discloses a descriptor identifying a scope of the function (e.g. para 0156, 0168, pg. 8), a descriptor identifying an acceptance of a variable input argument list into the function (para 0152, 0164, pg. 8; refer to claim 6); a descriptor identifying a return of a variable output argument list (para 0160, pg. 8; step 1222, Fig. 12; refer to claim 7) from the function.

As per claim 17, Meyer discloses a proxy instance storing the translated call in the second program file (para 0059-0060, pg. 3-4; para 0266 – pg. 18; Fig. 23).

As per claims 18-19, Meyer discloses wherein using the file of description items comprises: generating a call through a function evaluation interface for the function if the description information includes a descriptor identifying an acceptance (e.g. checks for exception – para 0226-0231, pg. 11-10 –Note: reading of parameters – see step 1001, Fig. 10 -- mapping and registering of attributes and parameter based on description of Interface object prior to dispatch reads on evaluation and acceptance – see Fig. 11-12 -- for list of arguments) of a variable input argument list into the function; generating a call through a function evaluation

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interface (para 0226-0231, pg. 11-10; Fig. 11-12) for the function if the description information includes a descriptor identifying a return of a variable output argument list from the function.

As per claim 20, refer to claim 18 for the subject matter wherein generating a call through a normal interface for the function if the description information includes a descriptor identifying a known number of input and output arguments to the function.

As per claim 39, Meyer disclose a product, stored on a machine-readable medium, for translating a program file, the product comprising instructions operable to cause a processor to:

provide a file of description items, each item including description information about a function associated with a first programming language,

provide a first program file in the first programming language, the first program file comprising one or more calls to the function in the first programming language;

retrieve an item from the file of description items;

use the description information to translate each of the one or more calls to the function in the first programming language into a call to a corresponding function in a second programming language while avoiding accessing the function in the first programming language; and

use the file of description items to translate a first program file into a second program file;

all of which limitations having been addressed in claim 11.

As per claims 40-48, refer to the corresponding rejections of claims 12-20, respectively.

Allowable Subject Matter

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11. Claims 1, 21, 29, 49 contain allowable subject matter, but would be allowable pending the resolution of deficiencies raised in the pending Office Action (e.g. 35 USC § 112 Rejection).

The subject matter being identified as potentially allowable subject matter, when taken into context the rest of the claimed features, would include:

‘ ... creating description information about the first function using the definition of the first function; translating the first function in the first programming language into a corresponding function in a second programming language using the definition of the first function; generating a function library containing the corresponding function in the second programming language ... and storing the function library’ (e.g. claim 1);

OR

‘ ... providing a library file including functions defined by a first language; creating a function library and a description file from the library file, the function library including one or more functions defined by a second language, each function in the function library being a translated version of a function in the library file ...’ (e.g. claim 49)

Response to Arguments

12. Applicant's arguments with respect to the Response as per 10/31/07 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan A Vu whose telephone number is (571) 272-3735. The examiner can normally be reached on 8AM-4:30PM/Mon-Fri.

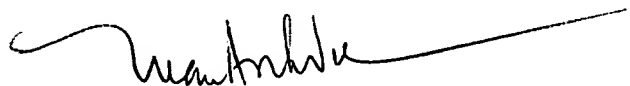
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571)272-3756.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273-3735 (for non-official correspondence - please consult Examiner before using) or 571-273-8300 (for official correspondence) or redirected to customer service at 571-272-3609.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Tuan A Vu
Patent Examiner,
Art Unit 2193
December 21, 2007